B10

22. (Twice Amended) The method according to claim 1 for use in automatically separating digitized films into individual sequences.

B1

23. (New) The method according to claim 1 for use in automatically separating digitized cardiological films into individual sequences.

REMARKS

Claims 1-22 have been amended for clarity to place them in better form for U.S. practice. Claim 23 has been added. Claim 23 adds no new matter and finds full support in the original specification, claims and drawings. Claims 1-23 are pending in this application. It is respectfully requested that the amendments to the claims are entered prior to examination.

Due to the number of amendments, a substitute specification pursuant to 37 CFR § 1.125 and MPEP § 608.01 (q) is submitted herewith to facilitate the prosecution of this application. The substitute specification is accompanied by a marked up copy showing the changes between the original application, as filed, and the substitute specification. The substitute specification does not contain any new matter and includes the same changes as are indicated in the marked up copy. Applicant respectfully requests that the substitute specification be entered in this case.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "**Version with markings to show changes made**."

In view of the forgoing amendments and remarks, consideration and allowance of this application is respectfully requested.

Respectfully submitted,
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Claims 1-22 have been amended as follows:

1. (Amended) [~~Method~~] A method for separating image sequences stored on media [~~such as motion-picture films, video tapes or such like~~] into individual sequences comprising: [~~,~~]

[~~in which sequence changes of a second type which are based on a change in the image content of successive images are detected and separation markers for the automatic separation of the image sequences into individual sequences are set,~~]

[~~characterized~~]

[~~in that in addition~~] determining sequence changes of a first type [~~in which~~] when a [~~the~~] mean image brightness of [~~the~~] a current image exceeds an upper threshold value [~~or falls below a limit~~] or is less than a lower threshold value, wherein the threshold values are calculated from a moving mean value of the image brightnesses of preceding images [~~are detected, and in that~~];

setting separation markers of a first type [~~are set~~] for sequence changes of the first type;

determining sequence changes of a second type, based on a change in an image content between successive images; and

setting separation markers of a second type [~~are set~~] for sequence changes of the second type.

2. (Amended) The method [~~Method~~] according to [~~Claim~~] claim 1, [~~characterized in that~~] wherein the sequence changes of the first type comprise a [~~predeterminable~~] predetermined number of successive individual images of substantially the same brightness.

3. (Amended) The method [~~Method~~] according to [~~Claim~~] claim 1, [~~characterized in that~~] wherein the sequence changes of the second type comprise a [~~predeterminable~~] predetermined number of

individual images having a substantially corresponding image content.

4. (Amended) [~~Method~~] The method according to [~~claim~~] claim 3, [~~characterized in that a~~] wherein the sequence [~~change~~] changes of the second type [~~comprises~~] comprise an individual image whose content differs from the [~~contents~~] content of its preceding images by a [~~predeterminable~~] predetermined amount.

5. (Twice Amended) [~~Method~~] The method according to claim 1, [~~characterized in that~~] wherein the image sequences are digitized before determining the [~~determination of~~] sequence changes of the first and second types.

6. (Twice Amended) [~~Method~~] The method according to claim 1, [~~characterized in that~~] further comprising examining the image sequences [~~are firstly examined~~] for separation markers of the first type and, in the absence of separation markers of the first type, [~~are examined~~] examining for separation markers of the second type.

7. (Amended) [~~Method~~] The method according to [~~claim~~] claim 6, [~~characterized in that~~] further comprising producing a provisional list of all possible separation markers [~~is created~~], and [~~in that~~] effecting a post-processing [~~is effected~~] in order to determine the individual sequences.

8. (Amended) [~~Method~~] The method according to [~~claim~~] claim 7, [~~characterized in that~~] wherein separation markers of the first type [~~are treated with~~] take priority over separation markers of the second type.

9. (Amended) [~~Method~~] The method according to [~~Claim~~] claim 7 [~~or 8, characterized in that~~] wherein separation markers of the second type which are situated within a predetermined [~~distance~~] number of individual images from separation markers of the first type are discarded.

10. (Twice Amended) [~~Method~~] The method according to claim 7, [~~characterized in that~~] wherein a separation [~~markers~~] marker of the second type [~~are~~] is discarded [~~taken into account only~~] if [~~the~~] its preceding image sequence does not contain [~~contains~~] a predetermined number of individual images.

11. (Twice Amended) [~~Method~~] The method according to claim 1, [~~characterized in that~~] wherein separation markers [~~which~~] that are based on image sequences [~~which fall below~~] that have less than a predetermined number of individual images are discarded.

12. (Twice Amended) [~~Method~~] The method according to claim 1, [~~characterized in that~~] wherein separation markers of the first type comprise a predetermined number of successive black [~~or~~] images or a predetermined number of successive white images.

13. (Twice Amended) [~~Method~~] The method according to claim 1 [~~characterized in that the~~] wherein images identified as separation markers are [~~themselves~~] not stored, and [~~in that the~~] wherein a first image immediately after [~~the~~] each separation marker is the first image of [~~the next~~] an image sequence.

14. (Twice Amended) [~~Method~~] The method according to claim 1, [~~characterized in that~~] further comprising calculating a moving mean value of the image brightnesses [~~is calculated~~] over a predetermined number of individual images and [~~a lower and an upper~~

~~peripheral value are determined~~] calculating the upper and lower threshold values from the moving mean value and a parameter for the response sensitivity of the separation markers of the first type, [~~and in that~~] such that a white separation marker is set if [~~the~~] a mean [~~value~~] image brightness of [~~the~~] a current image exceeds the upper threshold value, and [~~in that~~] a black separation marker is set if the mean [~~value~~] image brightness of [~~the~~] a current image [~~falls below~~] is less than the lower threshold value.

15. (Amended) [~~Method~~] The method according to [~~Claim~~] claim 14, [~~characterized in that the~~] wherein mean image brightness values of [~~the~~] images identified as separation markers do not enter into the moving [~~average~~] mean value calculation.

16. (Twice Amended) [~~Method~~] The method according to claim 1, [~~characterized in that,~~] further comprising setting [~~in order to find~~] separation markers of the second type between [~~the~~] a current and [~~the~~] a preceding image by [, ~~the~~] calculating a RMS deviation of [~~the~~] a pixel [~~brightnesses~~] brightness; [~~is calculated, in that~~] determining a moving mean value of the RMS deviations [~~is determined~~] over a [~~predeterminable~~] predetermined number of preceding image changes; determining [~~and~~] a second type threshold value [~~is determined~~] from a parameter specifying the response sensitivity for separation markers of the second type; and setting [~~, and in that~~] a separation marker [~~is set~~] if the RMS deviation of the [~~current image change~~] change in image from the current and proceeding images exceeds the second type threshold value.

17. (Amended) [~~Method~~] The method according to [~~Claim~~] claim 16, [~~characterized in that~~] wherein RMS deviations of separation markers of the second type [~~enter into~~] are used in calculating the moving mean value, but [~~those~~] the RMS deviation of separation

markers of the first type [~~do not~~] are not used in calculating the moving mean value.

18. (Amended) [~~Method~~] The method according to [~~Claim~~] claim 7, [~~characterized in that~~] further comprising [~~in order to determine the individual sequences from the list of all possible separation markers~~] discarding [~~there are discarded~~] all separation marker sequences with separation markers of the first type [~~which are shorter~~] that contain less than the number of individual images which is necessary in order to set a separation marker of the first type, and [~~in that there are discarded~~] discarding all separation markers of the second type which [~~lie nearer to the remaining~~] have fewer individual images between itself and a next separation [~~markers~~] marker of the first type than the minimum number of images of a sequence which is necessary in order to be terminated by separation markers of the second type.

19. (Twice Amended) [~~Method~~] The method according to claim 1, [~~characterized in that~~] wherein a sequence starts with a starting image chosen from the group consisting of [~~the~~] a first image of a file, a [~~or with the~~] first image after a separation marker of the first type, and [~~or with~~] a separation marker of the second type; and ends with an ending image chosen from the group consisting of [~~the~~] a last image of the file, a [~~or with the~~] last image before a separation marker of the first type, if it acquires at least the number of individual images which is necessary in order to set a separation marker of the first type, and [~~, or with~~] the last image before a separation marker of the second type, if it contains at least the minimum number of images of a sequence which is necessary in order to be terminated by separation markers of the second type.

20. (Twice Amended) [~~Method~~] The method according to claim 1, [~~characterized in that~~] wherein a selected individual image[~~,~~

~~preferably the first individual image in each case,~~] of an individual sequence is displayed as an icon on a monitor, and [~~in that~~] wherein the individual sequence is started by clicking on the icon.

21. (Amended) [~~Method~~] The method according to [~~Claim~~] claim 20, [~~characterized in that~~] wherein a sequence of individual sequences is started for viewing by clicking on a plurality of icons.

22. (Twice Amended) [~~Use of the~~] The method according to claim 1 for use in automatically separating digitized films[~~, in particular cardiological films,~~] into individual sequences.